

V VOL SIGNALS

Welcome to Vol Studies

SHELDON NATENBERG

*Option
Volatility
&
Pricing*

ADVANCED TRADING
STRATEGIES AND TECHNIQUES

SECOND EDITION

Option Volatility & Pricing



Week One

Chapter 1— Financial Contracts

- *Buying and Selling*
- *Notional Value of a Forward Contract*
- *Settlement Procedures*
- *Market Integrity*

Chapter 2— Forward Pricing

- *Physical Commodities*
- *Stock*
- *Bonds and Notes*
- *Foreign Currencies*
- ***Stock and Futures Options***
- *Arbitrage*
- *Dividends*
- *Short Sales*

Chapter 3— Contract Specifications and Option Terminology

- *Contract Specifications*
- *Option Price Components*



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Week Two

Chapter 4— Expiration Profit and Loss

- *Parity Graphs*

Chapter 5— Theoretical Pricing Models

- *The Importance of Probability*
- *A Simple Approach*
- ***The Black-Scholes Model***

Chapter 6— Volatility

- *Random Walks and Normal Distributions*
- *Mean and Standard Deviation*
- *Forward Price as the Mean of a Distribution*
- *Volatility as a Standard Deviation*
- *Scaling Volatility for Time*
- *Volatility and Observed Prices Changes*
- *A Note on Interest-Rate Products*
- *Lognormal Distributions*
- *Interpreting Volatility Data*

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Week Three

Chapter 7— Risk Measurement I

- *The Delta*
- *The Gamma*
- *The Theta*
- *The Vega*
- *The Rho*
- *Interpreting the Risk Measures*

Chapter 8— Dynamic Hedging

- *Original Hedge*

Chapter 9— Risk Measurement II

- *Delta*
- *Theta*
- *Vega*
- ***Gamma***
- *Lambda*

Chapter 10— Introduction to Spreading

- *What is a Spread?*
- *Option Spreads*

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Week Four

Chapter 11— Volatility Spreads

- *Straddle*
- *Strangle*
- *Butterfly*
- **Condor**
- *Ratio Spread*
- *Christmas Tree*
- *Calendar Spread*
- *Time Butterfly*
- *Effect of Changing Interest Rates and Dividends*
- *Diagonal Spreads*
- *Choosing an Appropriate Strategy*
- *Adjustments*
- *Submitting a Spread Order*

Chapter 12— Bull and Bear Spreads

- *Naked Positions*
- *Bull and Bear Ratio Spreads*
- *Bull and Bear Butterflies and Calendar Spreads*

Chapter 13— Risk Considerations

- **Volatility Risk**
- *Practical Considerations*
- *How Much Margin for Error?*
- *Dividends and Interest*
- **What Is a Good Spread?**

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Week Five

Chapter 14— Synthetics

- *Synthetic Underlying*
- *Synthetic Options*
- *Using Synthetics in a Spreading Strategy*
- *Iron Butterflies and Iron Condors*

Chapter 15— Option Arbitrage

- *Options on Futures*
- *Locked Futures Markets*
- *Options on Stock*
- *Arbitrage Risk*

Chapter 16— Early Exercise of American Options

- *Arbitrage Boundaries*
- *Early Exercise of Call Options on Stock*
- *Early Exercise of Put Options on Stock*
- *Impact of Short Stock on Early Exercise*
- *Early Exercise of Options on Futures*
- *Protective Value and Early Exercise*
- *Pricing of American Options*
- *Early Exercise Strategies*
- *Early Exercise Risk*

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Week Six

Chapter 17— Hedging with Options

- *Protective Calls and Puts*
- *Covered Writes*
- *Collars*
- *Complex Hedging Strategies*
- *Hedging to Reduce Volatility*
- *Portfolio Insurance*

Chapter 18— The Black-Scholes Model

- *$n(x)$ and $N(x)$*
- *A Useful Approximation*
- *The Delta*
- *The Theta*
- *Maximum Gamma, Theta, and Vega*

Chapter 19— Binomial Option Pricing

- *A Risk-Neutral World*
- *Valuing an Option*
- *The Delta*
- *The Gamma*
- *The Theta*
- *Vega and Rho*
- *The Values of 'u' and 'd'*
- *Gamma Rent*
- *American Options*
- *Dividends*

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Week Seven

Chapter 20— Volatility Revisited

- *Historical Volatility*
- *Volatility Forecasting*
- *Implied Volatility as a Predictor of Future Volatility*
- *Forward Volatility*

Chapter 21— Position Analysis

- *Some Thoughts on Market Making*
- *Stock Splits*

Chapter 22— Stock Index Futures and Options

- *What Is an Index?*
- *Stock Index Futures*
- *Stock Index Options*



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Week Eight

Chapter 23— Models and the Real World

- *Markets are Frictionless*
- *Interest Rates Are Constant over the Life of an Option*
- *Volatility is Constant over the Life of the Option*
- *Trading is Continuous*
- *Expiration Straddles*
- *Volatility is Independent of the Price of the Underlying Contract*
- *Underlying Prices at Expiration Are Lognormally Distributed*
- *Skewness and Kurtosis*

Week Nine

Chapter 24— Volatility Skews

- *Modeling the Skew*
- *Skewness and Kurtosis*
- *Skewed Risk Measures*
- *Shifting the Volatility*
- *Skewness and Kurtosis Strategies*
- *Implied Distributions*

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Week Ten

Chapter 25— Volatility Contracts

- *Realized Volatility Contracts*
- *Implied Volatility Contracts*
- *Trading the VIX*
- *Replicating a Volatility Contract*
- *Volatility Contract Applications*

Week Eleven

Afterword: A Final Thought

Surveys & Suggestions

“What Do I Do Next?”

...Final Wrap Up Session!